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MASTER FILE

DSSD CENSUS 2000 PROCEDURES AND OPERATIONS MEMORANDUM SERIES R- 22

MEMORANDUM FOR Howard Hogan
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Subject: Accuracy and Coverage Evaluation Survey: Cluster Reduction
 Contingency Plan

The delay in finishing the delivery of the Master Address File (MAF) Extract files from December 15, 1999 to January 7, 2000 affects plans for implementing the Accuracy and Coverage Evaluation (A.C.E.) cluster reduction. The Decennial Statistical Studies Division (DSSD) staff worked with staff from the Decennial Systems and Contracts Management Office (DSCMO) to develop a plan for dealing with the delay. Attached is our contingency plan.

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A.C.E. Cluster Reduction: Contingency Plans due to Delay in MAF Extract Delivery

This document outlines plans developed in conjunction with the DSCMO staff for implementing the A.C.E. cluster reduction given the delay in the finish of the MAF Extract delivery to the DSCMO from December 15, 1999 to January 7, 2000. These delayed MAF Extracts include updates from the September and November Delivery Sequence File (DSF) processing for Mailout/Mailback areas. The DSSD wants to use these census housing unit counts for the A.C.E. cluster reduction since they will be the most up-to-date counts at the time of the reduction. However, since the delay in delivering these files significantly cuts into the time for implementing and verifying the reduction, putting the successful completion of these activities at risk, we have developed a contingency plan.

BACKGROUND

A major component of the A.C.E. cluster reduction design is stratifying the clusters based on the relationship of current housing unit counts from the A.C.E. independent listing and the census address list. Clusters will be differentially sampled in order to reduce the variance contribution of clusters with significant differences between the census and the independent list housing unit counts. Clusters with significant differences are likely to have high erroneous enumerations and high nonmatch rates. The objective of differentially sampling these types of clusters is to reduce the magnitude of the weights associated with clusters having potentially high coverage measurement implications. It's important to have the most up-to-date housing unit counts in order to stratify the clusters effectively. Misclassification of clusters leads to undesired differential weights.

Under the original plans for the A.C.E. cluster reduction, the most up-to-date census housing unit counts were scheduled to be available on the Decennial Master Address File (DMAF) by December 23, 1999. This timing relied on the MAF Extracts, which contain the September and November DSF updates, being delivered to the DSCMO by December 15, 1999. The independent listing counts are scheduled to be available from the Technologies Management Office (TMO) on December 16, 1999 for all sample clusters. This is a one-time delivery for the entire national sample and no updates will be made after this delivery. The A.C.E. reduction is scheduled to begin the next working day following the DMAF updates, December 27, 1999. The verification and approval of the A.C.E. reduction must be completed by January 21, 2000. This finish date cannot be delayed because too many important activities rely on the timely completion of the A.C.E. reduction, and there is no slack in the schedule.

We have learned that the delivery of the MAF Extracts is delayed until January 7, 2000. The MAF Extracts will be delivered to the DSCMO on a flow-basis, state-by-state. It is our

understanding that January 7, 2000 is the date on which the last state file will be delivered. The DSCMO requires about a week to update the DMAF depending on how early the flow of states begins, the magnitude of the updates, and whether there are any reissues of MAF Extract files.

CONTINGENCY PROCESSING PLAN

Here are some highlights and implications of our strategy for dealing with the delay in the MAF Extracts and meeting the planned date of January 21, 2000 for completing the verification of the A.C.E. reduction.

- Implement the reduction as soon as the DMAF is updated with the January MAF Extracts.
- Successful implementation and verification relies on the process working smoothly.
 - The MAF Extracts have to be delivered on time, and there cannot be any surprises when updating the DMAF or implementing the reduction.
- As a contingency plan, the A.C.E. sample reduction will also be implemented in December, 1999. The December reduction will use the DMAF counts without the January updates.
 - The December production will not incorporate the September and November DSF updates.
 - The census counts will only include updates since the July and August deliveries due to the delivery of Puerto Rico, the November updates for Update Leave areas, and any housing units located at GQs from the December updates.
- The DSCMO and the DSSD will attempt to start the December production and verification earlier than originally planned, possibly as early as December 21, 1999, if other priorities allow.
 - We may be able to run earlier than originally scheduled because the December updating of the DMAF is not as extensive since the DSF updates are not being processed at this time.
 - We do not intend to update the MAS. We will try our best to run early, but circumstances may prevent this.
 - Our goal is to completely verify the December results before January 7, 2000.
- Every effort will be made to successfully verify the January production data by January 21, 2000. If by close of business on January 21, 2000, the January data is not verified, then the December data will be the official A.C.E. reduced sample.
- Using the December data as the official results has the following implications:
 - There may be a potential increase of the variance by 1) introducing undesired differential sampling caused by misclassifying clusters, and 2) losing the ability to

- detect clusters with significantly different housing unit counts between the A.C.E. and the census without having the September and November DSF updates.
 - This is a fallback plan to keep the A.C.E. program on schedule.
 - The reduction will be done using a different version of the DMAF than that used for the housing unit matching operation.
 - An extra task is necessary to provide the DMAF housing unit counts from the January update for small block cluster subsampling.
- This two-step process more than doubles the efforts to implement and verify the A.C.E. reduction. Additional efforts are required to manage and organize the system to ensure there is no corruption of files between the December and January processing.
 - We plan to process in separate computer subdirectories.
- We need to develop a policy for dispensing of the results which do not become "official". Do we delete these files? If we don't complete the verification of the January production by January 21, do we suspend the work forever and delete the results?
- If the MAF Extracts run late and all states are not delivered to the DSCMO by January 7, we will NOT implement the A.C.E. reduction using an updated DMAF. There is no chance of successfully updating the DMAF, implementing the reduction, and verifying the results by January 21, 2000.
 - We will not implement the reduction on a partially updated DMAF, even if 50 of the 51 states have been delivered by January 7, 2000.
 - Likewise, if there is a reissue of a MAF Extract after January 7, 2000, then we will not redo the reduction. We will stop all work on using an updated DMAF for the reduction, and the December results will be "official".
- On the surface, this contingency plan sounds fairly safe and straightforward to implement. However, the DMAF counts are critical input to the small block subsampling and it is important to have the January DMAF counts for this operation. It is risky to expect that the January results will be verified in time, so the contingency plan must address getting the January DMAF numbers for small block cluster subsampling under the scenario that the December results become official.
 - The accompanying flowchart shows the general flow of operations.
 - Both the December and January DMAF counts will be placed on the Sample Design File (SDF).
 - Regardless of which results are official, the small block cluster subsampling operation will use the January DMAF counts which are on a specified location on the SDF.

A.C.E. Cluster Reduction: Two-Stage Processing Flow

December 14, 1999

